Collider- Accelerator Department
Building 911A – P.O. Box 5000
Upton, NY 11973-5000
Phone 631 344 5636
Fax 631 344 5676
cirn@bnl.gov

managed by Brookhaven Science Associates
for the U.S. Department of Energy

Memo

Date: March 17, 2003

To: Distribution

From: Peter Cirnigliaro

Subject: Performance Indicators For C-A Department For CY02

In an effort to reduce injuries at C-A, we are distributing Quarterly Performance Indicators to all C-A employees. If you have specific questions about the data, please contact Ray Karol, Ed Lessard or myself.

For CY02, a collective dose of 21.3 person-rem was accumulated, see Table 1. The collective dose for the FY02 was 21.3 person-rem. The Department ALARA dose goal for FY02 was 23 person-rem. Thus, we were within our goal.

We were not within our goal for injury/illness cases. Nine recordable injury/illness cases were reported through CY02, excluding sports related cases. The corresponding Total Recordable Case Rate (TRC) is 2.08 per 100 FTEs. The Department goal for TRC was 1.5. Five lost work cases were reported through CY02, and the corresponding Lost Work Day Case Rate (LWC) is 1.16 per 100 FTEs. The Department goal for LWC was 0.5. For FY03, our goal is to achieve an excellent rating by being 30% less than the DOE-wide TRC and LWC. DOE-wide TRC was 2.1 and for LWC it was 0.9 in 2002 (see table below). In order to meet our goal, the C-AD will implement several safety initiatives this year including those from the Accelerated Safety Performance Improvement Initiative led by DuPont.

Year	DOE TRC	C-AD TRC	DOE LWC	C-AD LWC
2000	2.5	1.2	1.1	0.8
2001	2.4	1.6	1.0	0.2
2002	2.1	2.1	0.9	1.2

The attached tables illustrate OSHA type deficiencies found during Tier I inspections, training completion rates, occurrences and critiques. The Department was within the allowable allotments for radioactive, hazardous, mixed and industrial waste for CY02. For FY03, additional funding was obtained to remove radioactive waste from our high-energy physics facilities. It is noted that D&D work often produces higher injury rates and higher environmental occurrences than any other type of work at DOE facilities. Thus, the extra emphasis by the Department on injury reduction this year will have significant benefits.

TABLE 1, C-A DEPARTMENT PERFORMANCE INDICATORS

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	**2002**
Whole-Body Collective Dose (person-rem)	39	25	27	48	82	85	39	43.8	12.2	13.3	11.1	**21.9**
Skin and Clothing Contaminations	0	0	0	0	0	0	0	1	0	0	0	**1**
Internal Contamination	0	0	0	0	4	0	0	0	0	0	0	**0**
Radioactive/Hazardous Materials Overexposures	0	0	0	0	0	0	0	0	0	0	0	**0**
Lost Work Day Case Rate (# per 100 FTEs)	4.0	2.9	2.2	1.5	2.1	1.2	1.2	3.4	2.2	0.8	0.23	**1.16**
1. Cases	16	11	8	5	7	4	4	12	8	4	1	**5**
2. Total Hours Worked (1000s)	807	773	741	651	674	666	663	700	741	995	867	**864**
Recordable Injury/Illness Rate (# per 100 FTEs)	6.0	5.4	4.1	4.9	4.2	2.4	3.3	4.8	3.0	1.2	1.61	**2.08**
1. Cases	24	21	15	16	14	8	11	17	11	6	7	**9**
First Aid Cases Excluding Athletic Injuries										17	16	**19**
Unplanned Safety Function Actuations	0	1	3	1	0	0	0	0	0	0	0	**0**
Violations of Operating Procedures	0	0	0	3	1	0	0	0	0	0	0	**0**
Unplanned Shutdowns	0	0	0	0	0	0	0*	0	0	0	0	**0**
Unusual Occurrences	3	0	2	1	0	0	0	0	1	0	1	**0**
Off-Normal Occurrences	7	4	8	6	5	4	3	4	0	0	1	**1**
Occurrences With Open Corrective Actions	3	1	2	1	1	0	1	1	1	0	2	**0**
Environmental Related Occurrences	6	2	4	3	1	1	0	1	0	0	0	**0**
Solid Low-Level Waste Shipped												
1. Radioactive Waste (cu-ft)	3004	6354	2089	1742	2543	7018	6642	1494	624	1642	2719	**1624**
2. Hazardous Waste (cu-ft)**	4.3	16	6.0	47	26	24	51	14.5	16.1	91.4	32.4	**105**
3. Mixed Waste (cu-ft)**	25	4	140	39	6.8	38	117	0	18.75	40.3	21.6	**1400**
4. Industrial Waste (cu-ft)**	-	-	-	-	-	-	-	-	179.4	220.4	445.5	**42135**

*A three-day stand-down of BNL in June 1997 per order of Secretary of Energy. Initiating event was not related C-A.

** Assumes 64 lbs./ft^3.

TABLE 2, C-A OSHA-TYPE DEFICIENCIES FOUND DURING TIER 1 INSPECTION

OSH Category	Definition of Category	Number of Deficiencies 1998	Number of Deficiencies 1999	Number of Deficiencies 2000	Number of Deficiencies 2001	Number of Deficiencies 2002
General Safety	Load ratings not posted, broken hardware on doors, windows or machines, exposed building insulation, overdue inspection on cranes, hoists and elevators, lack of toe-boards or improper railings.	154	89	170	56	51
Electrical Safety	Inadequate breaker panel labels, exposed conductors, missing grounds, GFCI not used where needed, knockouts missing on breaker boxes and disconnects, blocked breaker boxes or blocked disconnects. Inspection of major electrical systems for overheating	82	60	96	61	78
Housekeeping	Poorly organized areas, excessive fire loading from boxes, plastic and packing materials or storage on top of cabinets.	37	22	41	25	25
Chemical Safety	Improper gas-cylinder storage improperly labeled or unlabeled hazardous materials, improper storage of hazardous materials.	36	34	71	23	43
Fire Protection / Life Safety	Excessive storage of flammables, missing floor or ceiling tiles, blocked exits, missing or non-functioning exit sign, damaged or broken fire protection / fire detection systems, or overdue extinguisher inspections.	73	38	16	20	41
Working Environment	Evidence of smoking or eating in work areas where prohibited, inadequate lighting or ventilation, inadequate aisle-ways, trip hazards in walkways, heat stress, high noise and no posting or ear protection where required.	0	0	0	24	66
Radiation Safety	Survey instruments out of calibration, radiation barriers or other controls in poor condition or poorly maintained posting.	1	6	12	7	10
Personnel Protection	Broken machine guards, not wearing personal protective equipment when required; for example, lack of safety glasses.	31	25	36	10	12
Unsafe Practices	Using broken or damaged tools or ladders, parking in no-parking areas, going the wrong way down one-way streets, not wearing a TLD badge or dosimeter when required, climbing without fall protection, failure to tie down ladders, or using cable tray for climbing.	0	1	1	1	0
Outside & Grounds	Overgrown walkways, dilapidated or poorly maintained walkways and improper storage outdoors.	4	2	4	6	4
Other	Leaking containers or piping, improper air emissions, unlabeled sinks, unlabeled containers, improperly controlled satellite areas for waste.	1	4	2	5	13

TABLE 3,
COMPLETION PERCENTAGE OF REQUIRED TRAINING FOR C-A EMPLOYEES

Time Period	Number of Requirements	Total Incomplete	Percent of Required Training Complete
Q4 CY 99	5236	1036	80
Q1 CY 00	4530	1233	73
Q2 CY 00	4757	913	81
Q3 CY 00	4754	241	95
Q4 CY 00	5174	531	90 (CY00 Average = 85%)
Q1 CY 01	5814	534	91
Q2 CY 01	5782	190	97
Q3 CY 01	5837	161	97
Q4 CY 01	6639	379	94 (CY01 Average = 95%)
Q1 CY 02	6859	236	97
Q2 CY 02	6980	148	97
Q3CY 02	7016	170	98
Q4CY 02	**7196**	**233**	**97** (CY 02 Average = 97%)

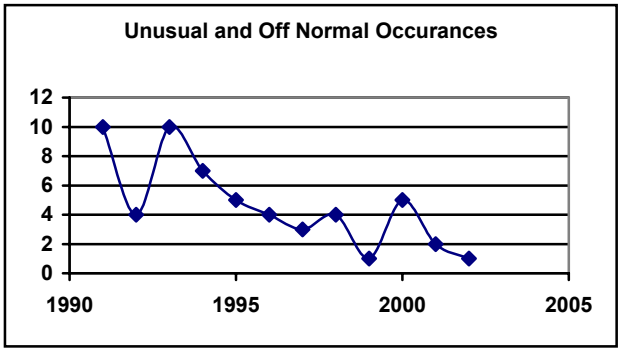
TABLE 4,
CY02 CRITIQUES OF C-AD NON-REPORTABLE EVENTS

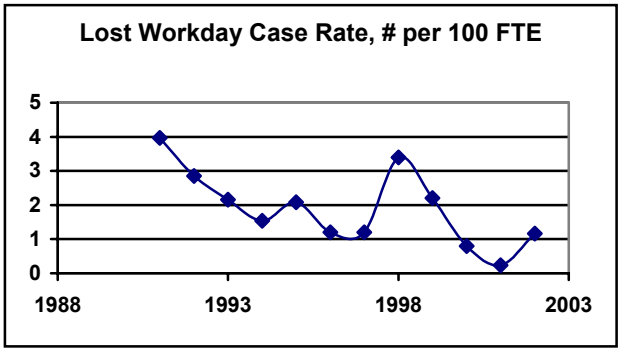
Work Control Error at TVDG, February 28, 2002
Booster Berm Unsecured, March 5, 2002
Incorrect NMC Monitor Placement, April 18, 2002
Finger Injury When Aligning Pump, March 20, 2002
Shoe Contamination Following Work in AGS, May 15, 2002
Routine Access to AGS Exceeds 20 mrem, May, 21, 2002
ODH Condition with Nitrogen, August 15, 2002
24-Volt Shock Event at Booster, September 24, 2002
Insulation Burned During Bakeout, October 22, 2002
50-Gallon Water Spill at STAR, October 27, 2002
15 kV Pad Mount Switch Damaged by Vehicle, October 29, 2002
Ad Hoc Committee Report on C-AD Electrical Safety, November 7, 2002
Potential Electrical Hazard During Pit Entry, December 4, 2002
Missing Barrier Observed During Sweep, December 10, 2002

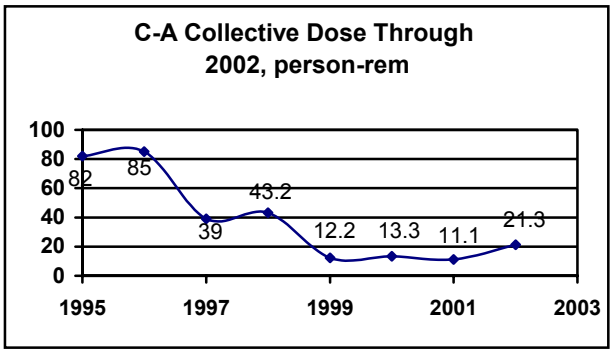
TABLE 5,
CY02 C-AD REPORTABLE OCCURRENCES

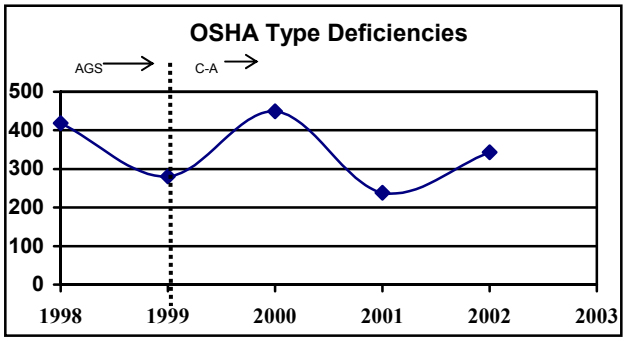
Shoe Contamination May 15, 2002

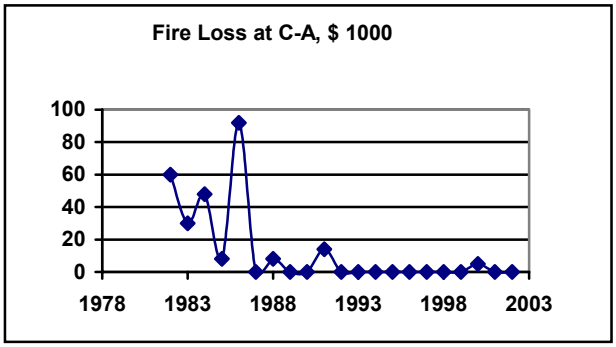
SELECTED GRAPHS OF PERFORMANCE INDICATORS

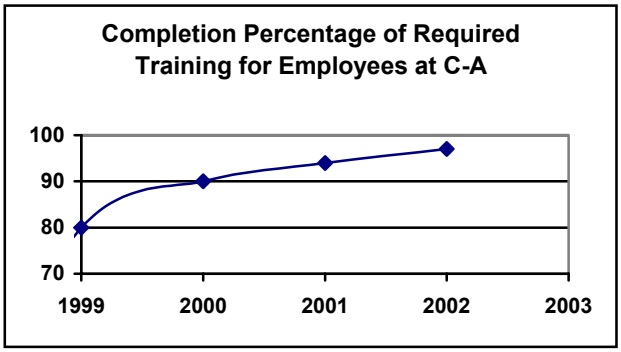


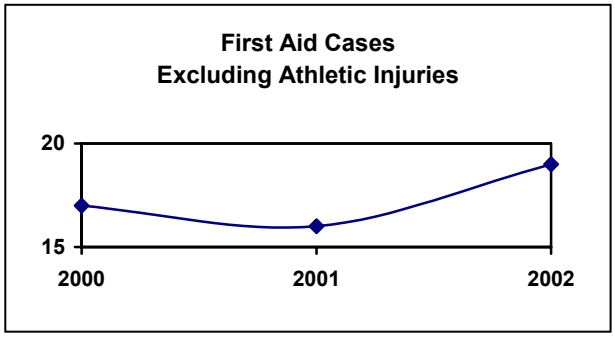












Distribution:

C-A Department

Brog, K.
Goode, G.
Hauser, J.
Kelley, P.
Kirk, T.
Layendecker, S.
Sheridan, T.
Wei, J.
White, O.